IN THE DRAWINGS

Please amend Figure 2 to include a "Prior Art" label.

REMARKS

Claims 1-28 were pending in this application.

Claims 1-28 have been rejected.

Claims 1-3, 9, 11, 15-17, 23, 25, 27, and 28 have been amended as shown above.

Claims 1-28 remain pending in this application.

Reconsideration and full allowance of Claims 1-28 are respectfully requested.

I.   OBJECTION TO DRAWINGS

The Office Action objects to the drawings because Figure 2 lacks a "Prior Art" label. The Applicant has amended Figure 2 to add the appropriate label. The Applicant has also included a replacement sheet incorporating this amendment to Figure 2. Accordingly, the Applicant respectfully requests withdrawal of the objection to the drawings.

II.   REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 1-10 and 15-24 under 35 U.S.C. § 103(a) as being unpatentable over Admitted Prior Art ("*APA*") in view of U.S. Patent No. 6,289,055 to Knotz ("*Knotz*"). The Office Action rejects Claims 11-14 and 25-28 under 35 U.S.C. § 103(a) as being unpatentable over *APA* and *Knotz* in further view of U.S. Patent No. 6,542,013 to Volk et al. ("*Volk*"). These rejections are respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. (*MPEP § 2142; In re Fritch, 972 F.2d 1260,*

1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992)). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. (*MPEP § 2142; In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984)).* Only when a *prima facie* case of obviousness is established does the burden shift to the Applicant to produce evidence of nonobviousness. (*MPEP § 2142; In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993)).* If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the Applicant is entitled to grant of a patent. (*In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Grabiak, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985)).*

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. (*In re Bell, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993)).* To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on the Applicant's disclosure. (*MPEP § 2142).*

-11-

APA recites a circuit having a reference clock counter 22, a high frequency clock counter

24, and a single comparator 27. (*Application, Figure 2*). The Office Action acknowledges that

APA fails to disclose "at least two comparators," each of which is operative "to compare [a]

pulse count with a respective given threshold value and to output a corresponding indication of

frequency deviation" as recited in Claims 1 and 15. (*Office Action, Page 3, Second paragraph*).

The Office Action then asserts that *Knotz* discloses these elements of Claims 1 and 15 and that it

would be obvious to modify *APA* with *Knotz*. (*Office Action, Page 3, Third and fourth*

paragraphs).

Knotz recites a system for simultaneously transmitting multiple digital signals over a

single lead. (*Abstract*). The digital signals S_{11}, S_{12}, ..., S_{1N} are summed in a transmitter 1 to

produce a multilevel signal *m*. (*Figure 1; Col. 3, Lines 12-16*). The multilevel signal *m* is then

sent to a receiver 3, which compares the multilevel signal *m* to multiple reference voltages V_1,

V_2, ..., V_N using comparators 31-3n. (*Col. 3, Lines 24-32*). The outputs of the comparators 31-

3n represent "digital transmission signals" S_{31}, S_{32}, ..., S_{3N}. (*Col. 3, Lines 24-32*). Additional

logic may then be used to help recover the original digital signals. (*Col. 3, Line 35 – Col. 7, Line*

44).

First, each of the comparators 31-3n of *Knotz* simply generates an output by comparing a

voltage of the multilevel signal *m* to a reference voltage. However, the outputs of the

comparators 31-3n in no way represent an "indication of frequency deviation." As clearly shown

in Figure 3 of *Knotz*, the different reference voltages of *Knotz* simply represent possible voltage

levels within the multilevel signal *m*. The different reference voltages of *Knotz* are not used in

any way to indicate a "frequency deviation" of a signal. As a result, *Knotz* fails to disclose, teach, or suggest "at least two comparators," each of which is operative "to compare [a] pulse count with a respective given threshold value and to output a corresponding indication of frequency deviation" as recited in Claims 1 and 15.

Second, the comparators 31-3n of *Knotz* are used for a purpose completely unrelated to any function of *APA*. The comparators 31-3n of *Knotz* are specifically used to allow multiple digital signals to be summed and transmitted over a single lead. The comparators 31-3n of *Knotz* must be used in order for the multiple digital signals to be recovered from the multilevel signal *m* at the receiver 3. This functionality is not needed in *APA* in any way. The high frequency clock counter 24 of *APA* outputs a single value to the comparator 27. *APA* never recites that the high frequency clock counter 24 needs to simultaneously output multiple values over a single lead. As a result, there is no need to incorporate the comparators 31-3n of *Knotz* into the system of *APA*.

For these reasons, the Office Action does not establish a *prima facie* case of obviousness against Claims 1 and 15 (and their dependent claims). Accordingly, the Applicant respectfully requests withdrawal of the § 103 rejections and full allowance of Claims 1-28.

III. CONCLUSION

The Applicant respectfully asserts that all pending claims in this application are in condition for allowance and respectfully requests full allowance of the claims.

SUMMARY

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Commissioner is authorized to charge any fees connected with this communication (including any extension of time fees) or credit any overpayment to Davis Munck Deposit Account No. 50-0208.

Respectfully submitted,

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